Algebra 2 – Transformations of Functions Homework 3

Name: _____

Hour: _____ Date: _____

For each function, given the name of the parent function and describe the transformations represented.

1) $g(x) = |x + 2|$

Parent Function: _____

Transformation(s): _____

2) $f(x) = 5\sqrt{x + 3}$

Parent Function: _____

Transformation(s): _____

3) $h(x) = x^2 - 4$

Parent Function: _____

Transformation(s): _____

4) $g(x) = 0.4\sqrt[3]{x - 2}$

Parent Function: _____

Transformation(s): _____

5) $f(x) = -(-x + 3)^2 - 2$

Parent Function: _____

Transformation(s): _____

6) $g(x) = 2^{x-3} + 4$

Parent Function: _____

Transformation(s): _____

7) $h(x) = -2|x| + 1$

Parent Function: _____

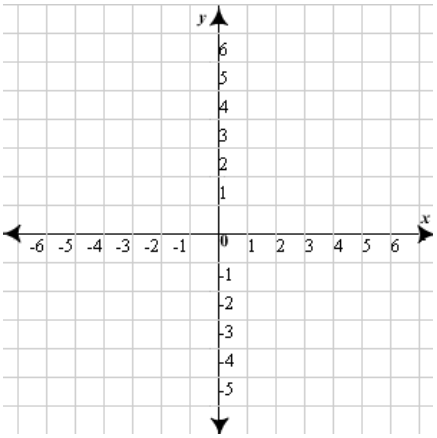
Transformation(s): _____

a) In pencil sketch a graph of the parent function

b) In a different color sketch a graph of the transformed function

c) Using complete sentences, describe the transformations that occurred to the parent function

8) $y = \sqrt{x+4}$



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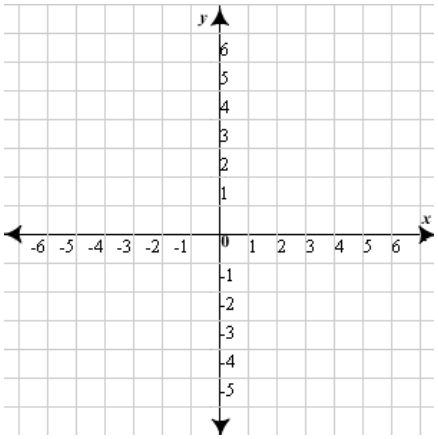
9) $y = \sqrt{x} + 4$



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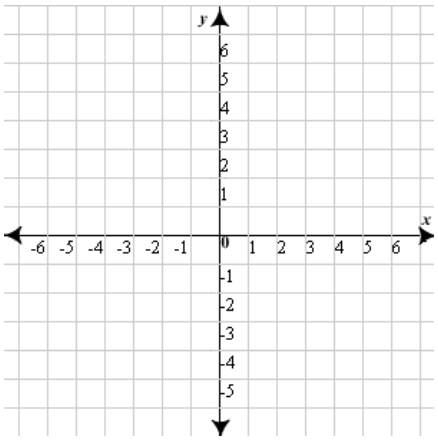
10) $y = -\sqrt{x}$



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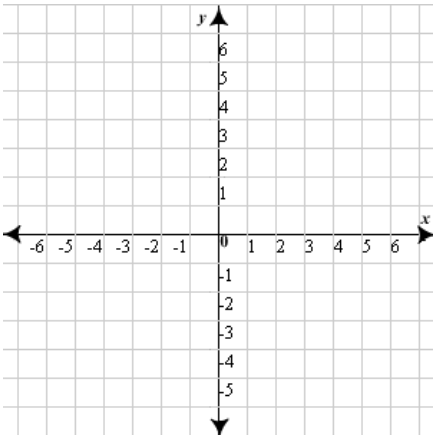
11) $y = \sqrt{-x}$



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12) Compare/contrast each of the functions from the same family that you graphed above. What do they have in common? What is the difference between these transformations?